

2022

**ZOOLOGY — HONOURS**

**Paper : SEC-A-1**

**(Apiculture)**

**Full Marks : 80**

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words  
as far as practicable.*

**Group - A**

Answer *any twenty* questions.

2×20

1. Cite an example of non-apis bee found in India with its distribution and host-plant.
2. What is bee wax? Name the natural enemies of honeybee.
3. State the chemical composition and economic importance of bee wax.
4. How would you identify the Queen bee in terms of morphology and activity?
5. Distinguish between worker cells and drone cells of a beehive.
6. What is Pollen Basket? State its function.
7. What do you mean by absconding swarm and mention its significance.
8. Write the composition of bee venom.
9. What is propolis? Mention its significance.
10. Which type of hive is popular for rearing honeybees in India and why?
11. What are the reasons for dividing a bee colony?
12. What are the benefits and significance of bee pollination?
13. Write a brief note on pests for honeybee colonies in India and mention the conditions of infestation.
14. What is migratory beekeeping? Why is it necessary?
15. Enlist the suitable crops for bee colony migrations mentioning their suitability.
16. What do you mean by nuptial flight? Mention its significances.
17. How many times Queen bee larvae moult before pupation and how long pupal stage lasts?
18. Name the largest and smallest bee found in India along with their distribution.

**Please Turn Over**

19. What is bee pasturage and what is their significance?
20. Write a short note on sting development in bees.
21. Why use of liquid smoke is referred in beekeeping industry?
22. Mention causative agents of American foulbrood disease and European foul brood disease in bees.
23. Write the suitability of *Apis florea* for artificial rearing.
24. What is pollen supplement? Why pollen supplement is required for bee colony?
25. Mention the scientific names of two avian fauna feed primarily on honeybee and bee wax.

**Group - B**

Answer *any eight* questions.

5×8

26. How is nectar transferred into honey by honeybees? State the chemical composition and nutritive values of honey.
  27. Elucidate briefly the nature of damage caused by a parasite and bacteria to the honeybees. Leave a note on their respective control measures.
  28. What is dance language hypothesis? Explain the dance phenomenon and its significance with examples.
  29. How castes are formed in a bee colony? What should you observe while inspecting a hive?
  30. Discuss the existing problems of apiculture in India and mention how to overcome it.
  31. With logical interpretations, write the major factors responsible for selecting a site for apiary. Is there any correlation between a site and honey production?
  32. Which qualities of honeybees make them most efficient pollinators? How honeybee colonies can be managed for crop yield?
  33. How assessment of demand is done to start a beekeeping business in India?
  34. Write the composition of honey and bee wax. Mention medicinal values of bee venom.
  35. What is Newton Box? Discuss hot-bath methods of bee wax extraction with diagram.
  36. Write a short note (Pathogen, Symptoms and Control) on clustering disease of honeybees.
  37. Write recent development, importance and problems of beekeeping in India.
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